



CALIFORNIA
High-Speed Rail Authority

High, Medium, Low Cash Flows

2014 BUSINESS PLAN

Section 6: *Financial Analysis and Funding*

California High-Speed Rail System



2014 BUSINESS PLAN TECHNICAL SUPPORTING DOCUMENT

High, Medium, Low Cash Flows

April 2014

Project Cash Flow Analysis

Section 6 provides a description of assumptions and potential cash flows from the high-speed rail system for the high, medium, and low ridership projections. Two versions of the net project cash flows through Phase 1 Blended through 2060 are provided in this appendix. The first is in Year of Expenditure (YOE) dollars which include inflation to the year that funds are collected or spent. The second version provides the cash flows in 2013 dollars which removes the effect of inflation from all amounts.

The net project cash flow calculation begins with the net cash flow from operations (revenue less operations and maintenance costs). Depreciation is a non-cash item and is excluded from this calculation. To account for capital replacement needs, the projected annual expenditures for repairing and replacing capital assets over time, including trains, equipment, and rail infrastructure, are then deducted to arrive at net operating cash flow after capital replacement costs. This represents the net cash flow available to be used for capital purposes and is before consideration of any debt service or investment returns.

Net Operating Cash Flow available after Capital Replacement is the free cash flow available for capital financing purposes or for servicing financing for capital construction.

This analysis provides an understanding of how total revenues, operating and maintenance costs, capital replacement, and construction costs interact together without regard to sources.

The cash flows included herein are based on assumptions related to revenues, operating and maintenance costs, capital replacement costs, and capital costs as described in the 2014 Business Plan.



High, Medium, Low Cash Flows (Year of Expenditure \$)



Exhibit 1. Net Project Cash Flow Through Phase 1 Blended (YOE dollars in millions) HIGH Case

\$'MM YOE	Total Cash Flow through 2060	2013	2014	2015	2016	2017	2018	2019	2020	2021
Revenue	\$195,328	-	-	-	-	-	-	-	-	-
Less: O&M	(\$86,955)	-	-	-	-	-	-	-	-	-
Net cash flow from operations	\$108,373	-	-	-	-	-	-	-	-	-
Capital replacement	(\$24,163)	-	-	-	-	-	-	-	-	-
Net operating cash flow after capital replacement	\$84,210	-	-	-	-	-	-	-	-	-
Capital cost	(\$67,593)	(212)	(915)	(4,189)	(4,198)	(4,425)	(5,682)	(5,257)	(4,946)	(5,295)
Net project cash flow	\$16,617	(212)	(915)	(4,189)	(4,198)	(4,425)	(5,682)	(5,257)	(4,946)	(5,295)
Cumulative net project cash flow		(212)	(1,127)	(5,316)	(9,514)	(13,939)	(19,621)	(24,878)	(29,824)	(35,119)

Note: Net Operating Cash Flow available after Capital Replacement is the free cash flow available for capital financing purposes or for servicing financing for capital construction.



Exhibit 1. Net Project Cash Flow Through Phase 1 Blended (YOE dollars in millions) HIGH Case (continued)

\$'MM YOE	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Revenue	437	640	860	1,102	1,370	1,690	1,878	2,289	2,595	2,897
Less: O&M	(340)	(378)	(471)	(558)	(605)	(939)	(989)	(1,410)	(1,476)	(1,534)
Net cash flow from operations	97	262	389	544	765	751	889	879	1,119	1,363
Capital replacement	-	-	-	-	-	-	-	-	-	(113)
Net operating cash flow after capital replacement	97	262	389	544	765	751	889	879	1,119	1,250
Capital cost	(4,725)	(6,210)	(6,396)	(6,588)	(3,624)	(2,430)	(2,503)	-	-	-
Net project cash flow	(4,627)	(5,947)	(6,007)	(6,044)	(2,859)	(1,679)	(1,614)	879	1,119	1,250
Cumulative net project cash flow	(39,746)	(45,694)	(51,701)	(57,745)	(60,604)	(62,282)	(63,896)	(63,017)	(61,898)	(60,648)

Note: Net Operating Cash Flow available after Capital Replacement is the free cash flow available for capital financing purposes or for servicing financing for capital construction.



Exhibit 1. Net Project Cash Flow Through Phase 1 Blended (YOE dollars in millions) HIGH Case (continued)

\$'MM YOE	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Revenue	3,121	3,363	3,523	3,690	3,864	4,047	4,238	4,439	4,649	4,837
Less: O&M	(1,592)	(1,650)	(1,705)	(1,761)	(1,836)	(1,901)	(1,971)	(2,043)	(2,119)	(2,194)
Net cash flow from operations	1,529	1,713	1,818	1,929	2,028	2,146	2,267	2,396	2,530	2,642
Capital replacement	(116)	(73)	(1)	(1)	(73)	(111)	(112)	(82)	(128)	(314)
Net operating cash flow after capital replacement	1,413	1,640	1,817	1,927	1,955	2,035	2,155	2,314	2,401	2,328
Capital cost	-	-	-	-	-	-	-	-	-	-
Net project cash flow	1,413	1,640	1,817	1,927	1,955	2,035	2,155	2,314	2,401	2,328
Cumulative net project cash flow	(59,235)	(57,595)	(55,779)	(53,852)	(51,896)	(49,861)	(47,706)	(45,392)	(42,991)	(40,663)

Note: Net Operating Cash Flow available after Capital Replacement is the free cash flow available for capital financing purposes or for servicing financing for capital construction.



Exhibit 1. Net Project Cash Flow Through Phase 1 Blended (YOE dollars in millions) HIGH Case (continued)

\$'MM YOE	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
Revenue	5,033	5,236	5,447	5,667	5,896	6,134	6,382	6,640	6,908	7,187
Less: O&M	(2,265)	(2,345)	(2,421)	(2,519)	(2,606)	(2,692)	(2,787)	(2,888)	(2,977)	(3,088)
Net cash flow from operations	2,767	2,891	3,026	3,148	3,290	3,442	3,595	3,752	3,932	4,099
Capital replacement	(354)	(293)	(201)	(176)	(381)	(470)	(474)	(444)	(1,227)	(1,408)
Net operating cash flow after capital replacement	2,413	2,598	2,825	2,972	2,908	2,972	3,121	3,308	2,704	2,691
Capital cost	-	-	-	-	-	-	-	-	-	-
Net project cash flow	2,413	2,598	2,825	2,972	2,908	2,972	3,121	3,308	2,704	2,691
Cumulative net project cash flow	(38,250)	(35,651)	(32,826)	(29,855)	(26,946)	(23,974)	(20,853)	(17,545)	(14,841)	(12,149)

Note: Net Operating Cash Flow available after Capital Replacement is the free cash flow available for capital financing purposes or for servicing financing for capital construction.



Exhibit 1. Net Project Cash Flow Through Phase 1 Blended (YOE dollars in millions) HIGH Case (continued)

\$'MM YOE	2052	2053	2054	2055	2056	2057	2058	2059	2060
Revenue	7,478	7,780	8,095	8,421	8,762	9,115	9,484	9,868	10,266
Less: O&M	(3,182)	(3,301)	(3,406)	(3,525)	(3,641)	(3,777)	(3,892)	(4,019)	(4,153)
Net cash flow from operations	4,296	4,479	4,688	4,896	5,121	5,338	5,593	5,849	6,113
Less: capital replacement	(1,782)	(1,987)	(2,306)	(1,868)	(1,820)	(2,072)	(1,897)	(2,026)	(1,850)
Net operating cash flow after capital replacement	2,514	2,492	2,383	3,028	3,300	3,266	3,696	3,823	4,264
Less: capital cost	-	-	-	-	-	-	-	-	-
Net project cash flow	2,514	2,492	2,383	3,028	3,300	3,266	3,696	3,823	4,264
Cumulative net project cash flow	(9,636)	(7,143)	(4,761)	(1,732)	1,568	4,834	8,530	12,353	16,617

Note: Net Operating Cash Flow available after Capital Replacement is the free cash flow available for capital financing purposes or for servicing financing for capital construction.



Exhibit 1. Net Project Cash Flow Through Phase 1 Blended (YOE dollars in millions) MEDIUM Case

\$'MM YOE	Total Cash Flow through 2060	2013	2014	2015	2016	2017	2018	2019	2020	2021
Revenue	152,326	-	-	-	-	-	-	-	-	-
Less: O&M	(77,235)	-	-	-	-	-	-	-	-	-
Net cash flow from operations	75,091	-	-	-	-	-	-	-	-	-
Capital replacement	(22,185)	-	-	-	-	-	-	-	-	-
Net operating cash flow after capital replacement	52,906	-	-	-	-	-	-	-	-	-
Capital cost	(67,593)	(212)	(915)	(4,189)	(4,198)	(4,425)	(5,682)	(5,257)	(4,946)	(5,295)
Net project cash flow	(14,687)	(212)	(915)	(4,189)	(4,198)	(4,425)	(5,682)	(5,257)	(4,946)	(5,295)
Cumulative net project cash flow		(212)	(1,127)	(5,316)	(9,514)	(13,939)	(19,621)	(24,878)	(29,824)	(35,119)

Note: Net Operating Cash Flow available after Capital Replacement is the free cash flow available for capital financing purposes or for servicing financing for capital construction.



Exhibit 1. Net Project Cash Flow Through Phase 1 Blended (YOE dollars in millions) MEDIUM Case (continued)

\$'MM YOE	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Revenue	324	475	639	819	1,019	1,289	1,441	1,772	2,018	2,264
Less: O&M	(300)	(334)	(418)	(496)	(538)	(835)	(880)	(1,253)	(1,312)	(1,363)
Net cash flow from operations	24	141	221	323	481	454	561	519	707	901
Capital replacement	-	-	-	-	-	-	-	-	-	(104)
Net operating cash flow after capital replacement	24	141	221	323	481	454	561	519	707	797
Capital cost	(4,725)	(6,210)	(6,396)	(6,588)	(3,624)	(2,430)	(2,503)	-	-	-
Net project cash flow	(4,701)	(6,069)	(6,175)	(6,265)	(3,142)	(1,976)	(1,942)	519	707	797
Cumulative net project cash flow	(39,820)	(45,888)	(52,063)	(58,328)	(61,470)	(63,446)	(65,388)	(64,869)	(64,162)	(63,365)

Note: Net Operating Cash Flow available after Capital Replacement is the free cash flow available for capital financing purposes or for servicing financing for capital construction.



Exhibit 1. Net Project Cash Flow Through Phase 1 Blended (YOE dollars in millions) MEDIUM Case (continued)

\$'MM YOE	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Revenue	2,439	2,626	2,751	2,881	3,017	3,160	3,310	3,467	3,631	3,778
Less: O&M	(1,414)	(1,466)	(1,514)	(1,565)	(1,631)	(1,689)	(1,751)	(1,815)	(1,882)	(1,949)
Net cash flow from operations	1,025	1,160	1,236	1,317	1,386	1,471	1,559	1,652	1,749	1,829
Capital replacement	(107)	(67)	(1)	(1)	(67)	(102)	(103)	(75)	(118)	(289)
Net operating cash flow after capital replacement	918	1,093	1,235	1,315	1,320	1,370	1,456	1,577	1,632	1,541
Capital cost	-	-	-	-	-	-	-	-	-	-
Net project cash flow	918	1,093	1,235	1,315	1,320	1,370	1,456	1,577	1,632	1,541
Cumulative net project cash flow	(62,447)	(61,354)	(60,119)	(58,804)	(57,484)	(56,115)	(54,659)	(53,082)	(51,451)	(49,910)

Note: Net Operating Cash Flow available after Capital Replacement is the free cash flow available for capital financing purposes or for servicing financing for capital construction.



Exhibit 1. Net Project Cash Flow Through Phase 1 Blended (YOE dollars in millions) MEDIUM Case (continued)

\$'MM YOE	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
Revenue	3,931	4,089	4,255	4,426	4,605	4,792	4,985	5,186	5,396	5,614
Less: O&M	(2,011)	(2,082)	(2,150)	(2,237)	(2,315)	(2,391)	(2,475)	(2,565)	(2,644)	(2,743)
Net cash flow from operations	1,919	2,008	2,105	2,189	2,291	2,401	2,510	2,622	2,753	2,871
Capital replacement	(325)	(269)	(185)	(162)	(350)	(432)	(436)	(408)	(1,127)	(1,293)
Net operating cash flow after capital replacement	1,594	1,739	1,920	2,028	1,940	1,969	2,074	2,214	1,626	1,579
Capital cost	-	-	-	-	-	-	-	-	-	-
Net project cash flow	1,594	1,739	1,920	2,028	1,940	1,969	2,074	2,214	1,626	1,579
Cumulative net project cash flow	(48,315)	(46,577)	(44,656)	(42,629)	(40,688)	(38,719)	(36,645)	(34,431)	(32,805)	(31,227)

Note: Net Operating Cash Flow available after Capital Replacement is the free cash flow available for capital financing purposes or for servicing financing for capital construction.



Exhibit 1. Net Project Cash Flow Through Phase 1 Blended (YOE dollars in millions) MEDIUM Case (continued)

\$'MM YOE	2052	2053	2054	2055	2056	2057	2058	2059	2060
Revenue	5,842	6,077	6,323	6,579	6,845	7,121	7,409	7,709	8,020
Less: O&M	(2,826)	(2,932)	(3,025)	(3,131)	(3,234)	(3,355)	(3,457)	(3,570)	(3,689)
Net cash flow from operations	3,016	3,146	3,298	3,448	3,610	3,766	3,952	4,139	4,331
Less: capital replacement	(1,637)	(1,824)	(2,117)	(1,715)	(1,671)	(1,903)	(1,742)	(1,860)	(1,698)
Net operating cash flow after capital replacement	1,379	1,322	1,181	1,733	1,939	1,863	2,210	2,279	2,633
Less: capital cost	-	-	-	-	-	-	-	-	-
Net project cash flow	1,379	1,322	1,181	1,733	1,939	1,863	2,210	2,279	2,633
Cumulative net project cash flow	(29,848)	(28,526)	(27,345)	(25,612)	(23,673)	(21,810)	(19,600)	(17,320)	(14,687)

Note: Net Operating Cash Flow available after Capital Replacement is the free cash flow available for capital financing purposes or for servicing financing for capital construction.



Exhibit 1. Net Project Cash Flow Through Phase 1 Blended (YOE dollars in millions) LOW Case

\$'MM YOE	Total Cash Flow through 2060	2013	2014	2015	2016	2017	2018	2019	2020	2021
Revenue	114,392	-	-	-	-	-	-	-	-	-
Less: O&M	(69,392)	-	-	-	-	-	-	-	-	-
Net cash flow from operations	45,000	-	-	-	-	-	-	-	-	-
Capital replacement	(20,123)	-	-	-	-	-	-	-	-	-
Net operating cash flow after capital replacement	24,877	-	-	-	-	-	-	-	-	-
Capital cost	(67,593)	(212)	(915)	(4,189)	(4,198)	(4,425)	(5,682)	(5,257)	(4,946)	(5,295)
Net project cash flow	(42,716)	(212)	(915)	(4,189)	(4,198)	(4,425)	(5,682)	(5,257)	(4,946)	(5,295)
Cumulative net project cash flow		(212)	(1,127)	(5,316)	(9,514)	(13,939)	(19,621)	(24,878)	(29,824)	(35,119)

Note: Net Operating Cash Flow available after Capital Replacement is the free cash flow available for capital financing purposes or for servicing financing for capital construction.



Exhibit 1. Net Project Cash Flow Through Phase 1 Blended (YOE dollars in millions) LOW Case (continued)

\$'MM YOE	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Revenue	234	338	456	585	729	936	1,050	1,306	1,497	1,692
Less: O&M	(284)	(312)	(377)	(438)	(473)	(734)	(772)	(1,121)	(1,173)	(1,218)
Net cash flow from operations	(50)	27	79	147	256	202	278	185	325	474
Capital replacement	-	-	-	-	-	-	-	-	-	(94)
Net operating cash flow after capital replacement	(50)	27	79	147	256	202	278	185	325	380
Capital cost	(4,725)	(6,210)	(6,396)	(6,588)	(3,624)	(2,430)	(2,503)	-	-	-
Net project cash flow	(4,774)	(6,183)	(6,317)	(6,441)	(3,367)	(2,227)	(2,224)	185	325	380
Cumulative net project cash flow	(39,893)	(46,076)	(52,393)	(58,833)	(62,201)	(64,428)	(66,653)	(66,468)	(66,144)	(65,764)

Note: Net Operating Cash Flow available after Capital Replacement is the free cash flow available for capital financing purposes or for servicing financing for capital construction.



Exhibit 1. Net Project Cash Flow Through Phase 1 Blended (YOE dollars in millions) LOW Case (continued)

\$'MM YOE	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Revenue	1,829	1,976	2,070	2,168	2,271	2,378	2,491	2,609	2,732	2,843
Less: O&M	(1,264)	(1,311)	(1,354)	(1,399)	(1,458)	(1,510)	(1,565)	(1,624)	(1,700)	(1,760)
Net cash flow from operations	565	665	715	769	813	868	926	986	1,032	1,082
Capital replacement	(97)	(61)	(1)	(1)	(60)	(92)	(93)	(68)	(107)	(262)
Net operating cash flow after capital replacement	468	604	714	768	752	776	832	918	925	821
Capital cost	-	-	-	-	-	-	-	-	-	-
Net project cash flow	468	604	714	768	752	776	832	918	925	821
Cumulative net project cash flow	(65,296)	(64,691)	(63,977)	(63,209)	(62,457)	(61,681)	(60,849)	(59,931)	(59,006)	(58,185)

Note: Net Operating Cash Flow available after Capital Replacement is the free cash flow available for capital financing purposes or for servicing financing for capital construction.



Exhibit 1. Net Project Cash Flow Through Phase 1 Blended (YOE dollars in millions) LOW Case (continued)

\$'MM YOE	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
Revenue	2,958	3,077	3,202	3,331	3,466	3,606	3,752	3,904	4,062	4,226
Less: O&M	(1,818)	(1,880)	(1,941)	(2,017)	(2,085)	(2,153)	(2,227)	(2,307)	(2,379)	(2,467)
Net cash flow from operations	1,140	1,197	1,260	1,314	1,381	1,453	1,525	1,596	1,682	1,758
Capital replacement	(295)	(244)	(167)	(147)	(318)	(392)	(395)	(370)	(1,022)	(1,173)
Net operating cash flow after capital replacement	845	953	1,093	1,167	1,063	1,062	1,130	1,226	660	586
Capital cost	-	-	-	-	-	-	-	-	-	-
Net project cash flow	845	953	1,093	1,167	1,063	1,062	1,130	1,226	660	586
Cumulative net project cash flow	(57,340)	(56,387)	(55,294)	(54,127)	(53,064)	(52,002)	(50,872)	(49,646)	(48,986)	(48,400)

Note: Net Operating Cash Flow available after Capital Replacement is the free cash flow available for capital financing purposes or for servicing financing for capital construction.



Exhibit 1. Net Project Cash Flow Through Phase 1 Blended (YOE dollars in millions) LOW Case (continued)

\$'MM YOE	2052	2053	2054	2055	2056	2057	2058	2059	2060
Revenue	4,397	4,575	4,760	4,952	5,153	5,361	5,578	5,804	6,038
Less: O&M	(2,544)	(2,638)	(2,723)	(2,817)	(2,908)	(3,014)	(3,105)	(3,206)	(3,313)
Net cash flow from operations	1,853	1,937	2,037	2,135	2,244	2,346	2,473	2,597	2,725
Less: capital replacement	(1,484)	(1,654)	(1,920)	(1,556)	(1,516)	(1,726)	(1,580)	(1,687)	(1,540)
Net operating cash flow after capital replacement	368	282	117	579	728	621	893	910	1,185
Less: capital cost	-	-	-	-	-	-	-	-	-
Net project cash flow	368	282	117	579	728	621	893	910	1,185
Cumulative net project cash flow	(48,032)	(47,749)	(47,632)	(47,053)	(46,325)	(45,704)	(44,811)	(43,901)	(42,716)

Note: Net Operating Cash Flow available after Capital Replacement is the free cash flow available for capital financing purposes or for servicing financing for capital construction.



High, Medium, Low Cash Flows (2013\$)



Exhibit 1. Net Project Cash Flow Through Phase 1 Blended (2013 dollars in millions) HIGH Case

2013\$ MM	Total Cash Flow through 2060	2013	2014	2015	2016	2017	2018	2019	2020	2021
Revenue	\$79,161	-	-	-	-	-	-	-	-	-
Less: O&M	(\$34,972)	-	-	-	-	-	-	-	-	-
Net cash flow from operations	\$44,190	-	-	-	-	-	-	-	-	-
Capital replacement	(\$7,656)	-	-	-	-	-	-	-	-	-
Net operating cash flow after capital replacement	\$36,534	-	-	-	-	-	-	-	-	-
Capital cost	(\$55,016)	(212)	(897)	(4,026)	(3,956)	(4,048)	(5,047)	(4,533)	(4,141)	(4,304)
Net project cash flow	(\$18,482)	(212)	(897)	(4,026)	(3,956)	(4,048)	(5,047)	(4,533)	(4,141)	(4,304)
Cumulative net project cash flow		(212)	(1,109)	(5,135)	(9,091)	(13,139)	(18,186)	(22,720)	(26,861)	(31,165)

Note: Net Operating Cash Flow available after Capital Replacement is the free cash flow available for capital financing purposes or for servicing financing for capital construction (excluding consideration of inflation).



Exhibit 1. Net Project Cash Flow Through Phase 1 Blended (2013 dollars in millions) HIGH Case (continued)

2013\$ MM	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Revenue	346	494	645	804	973	1,166	1,258	1,492	1,644	1,774
Less: O&M	(268)	(289)	(350)	(403)	(424)	(639)	(653)	(905)	(920)	(928)
Net cash flow from operations	78	204	295	401	549	527	605	587	725	847
Capital replacement	-	-	-	-	-	-	-	-	-	(68)
Net operating cash flow after capital replacement	78	204	295	401	549	527	605	587	725	778
Capital cost	(3,729)	(4,758)	(4,758)	(4,758)	(2,541)	(1,654)	(1,654)	-	-	-
Net project cash flow	(3,651)	(4,553)	(4,463)	(4,357)	(1,992)	(1,127)	(1,049)	587	725	778
Cumulative net project cash flow	(34,815)	(39,369)	(43,832)	(48,188)	(50,180)	(51,307)	(52,357)	(51,770)	(51,045)	(50,267)

Note: Net Operating Cash Flow available after Capital Replacement is the free cash flow available for capital financing purposes or for servicing financing for capital construction (excluding consideration of inflation).



Exhibit 1. Net Project Cash Flow Through Phase 1 Blended (2013 dollars in millions) HIGH Case (continued)

2013\$ MM	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Revenue	1,857	1,946	1,981	2,017	2,053	2,091	2,129	2,168	2,207	2,233
Less: O&M	(935)	(941)	(944)	(946)	(958)	(963)	(969)	(976)	(982)	(988)
Net cash flow from operations	922	1,005	1,037	1,071	1,095	1,128	1,159	1,192	1,225	1,245
Capital replacement	(68)	(42)	(1)	(1)	(38)	(56)	(55)	(39)	(60)	(141)
Net operating cash flow after capital replacement	854	963	1,037	1,070	1,057	1,071	1,104	1,153	1,165	1,104
Capital cost	-	-	-	-	-	-	-	-	-	-
Net project cash flow	854	963	1,037	1,070	1,057	1,071	1,104	1,153	1,165	1,104
Cumulative net project cash flow	(49,413)	(48,450)	(47,413)	(46,343)	(45,286)	(44,214)	(43,110)	(41,957)	(40,792)	(39,688)

Note: Net Operating Cash Flow available after Capital Replacement is the free cash flow available for capital financing purposes or for servicing financing for capital construction (excluding consideration of inflation).



Exhibit 1. Net Project Cash Flow Through Phase 1 Blended (2013 dollars in millions) HIGH Case (continued)

2013\$ MM	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
Revenue	2,259	2,285	2,312	2,339	2,366	2,395	2,423	2,452	2,482	2,512
Less: O&M	(990)	(995)	(997)	(1,007)	(1,012)	(1,015)	(1,020)	(1,026)	(1,027)	(1,034)
Net cash flow from operations	1,269	1,291	1,315	1,331	1,355	1,380	1,403	1,426	1,455	1,478
Capital replacement	(155)	(124)	(83)	(71)	(148)	(177)	(174)	(158)	(423)	(472)
Net operating cash flow after capital replacement	1,114	1,166	1,232	1,261	1,207	1,203	1,230	1,268	1,032	1,006
Capital cost	-	-	-	-	-	-	-	-	-	-
Net project cash flow	1,114	1,166	1,232	1,261	1,207	1,203	1,230	1,268	1,032	1,006
Cumulative net project cash flow	(38,574)	(37,407)	(36,175)	(34,915)	(33,708)	(32,505)	(31,275)	(30,007)	(28,975)	(27,969)

Note: Net Operating Cash Flow available after Capital Replacement is the free cash flow available for capital financing purposes or for servicing financing for capital construction (excluding consideration of inflation).



Exhibit 1. Net Project Cash Flow Through Phase 1 Blended (2013 dollars in millions) HIGH Case (continued)

2013\$ MM	2052	2053	2054	2055	2056	2057	2058	2059	2060
Revenue	2,543	2,574	2,606	2,638	2,671	2,704	2,739	2,774	2,810
Less: O&M	(1,035)	(1,042)	(1,044)	(1,049)	(1,052)	(1,059)	(1,060)	(1,062)	(1,066)
Net cash flow from operations	1,508	1,532	1,562	1,589	1,619	1,645	1,679	1,712	1,744
Less: capital replacement	(580)	(627)	(707)	(556)	(526)	(581)	(517)	(536)	(475)
Net operating cash flow after capital replacement	929	905	855	1,033	1,093	1,064	1,163	1,176	1,269
Less: capital cost	-	-	-	-	-	-	-	-	-
Net project cash flow	929	905	855	1,033	1,093	1,064	1,163	1,176	1,269
Cumulative net project cash flow	(27,040)	(26,136)	(25,280)	(24,247)	(23,154)	(22,090)	(20,927)	(19,751)	(18,482)

Note: Net Operating Cash Flow available after Capital Replacement is the free cash flow available for capital financing purposes or for servicing financing for capital construction (excluding consideration of inflation).



Exhibit 1. Net Project Cash Flow Through Phase 1 Blended (2013 dollars in millions) MEDIUM Case

2013\$ MM	Total Cash Flow through 2060	2013	2014	2015	2016	2017	2018	2019	2020	2021
Revenue	61,440	-	-	-	-	-	-	-	-	-
Less: O&M	(31,063)	-	-	-	-	-	-	-	-	-
Net cash flow from operations	30,377	-	-	-	-	-	-	-	-	-
Capital replacement	(7,029)	-	-	-	-	-	-	-	-	-
Net operating cash flow after capital replacement	23,348	-	-	-	-	-	-	-	-	-
Capital cost	(55,016)	(212)	(897)	(4,026)	(3,956)	(4,048)	(5,047)	(4,533)	(4,141)	(4,304)
Net project cash flow	(31,668)	(212)	(897)	(4,026)	(3,956)	(4,048)	(5,047)	(4,533)	(4,141)	(4,304)
Cumulative net project cash flow		(212)	(1,109)	(5,135)	(9,091)	(13,139)	(18,186)	(22,720)	(26,861)	(31,165)

Note: Net Operating Cash Flow available after Capital Replacement is the free cash flow available for capital financing purposes or for servicing financing for capital construction (excluding consideration of inflation).



Exhibit 1. Net Project Cash Flow Through Phase 1 Blended (2013 dollars in millions) MEDIUM Case (continued)

2013\$ MM	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Revenue	256	366	479	597	723	887	963	1,153	1,277	1,385
Less: O&M	(237)	(256)	(311)	(358)	(377)	(568)	(581)	(804)	(817)	(825)
Net cash flow from operations	19	110	168	238	346	318	382	349	460	561
Capital replacement	-	-	-	-	-	-	-	-	-	(63)
Net operating cash flow after capital replacement	19	110	168	238	346	318	382	349	460	498
Capital cost	(3,729)	(4,758)	(4,758)	(4,758)	(2,541)	(1,654)	(1,654)	-	-	-
Net project cash flow	(3,710)	(4,648)	(4,590)	(4,519)	(2,195)	(1,336)	(1,273)	349	460	498
Cumulative net project cash flow	(34,874)	(39,522)	(44,112)	(48,632)	(50,827)	(52,162)	(53,435)	(53,086)	(52,626)	(52,128)

Note: Net Operating Cash Flow available after Capital Replacement is the free cash flow available for capital financing purposes or for servicing financing for capital construction (excluding consideration of inflation).



Exhibit 1. Net Project Cash Flow Through Phase 1 Blended (2013 dollars in millions) MEDIUM Case (continued)

2013\$ MM	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Revenue	1,450	1,516	1,544	1,572	1,600	1,629	1,658	1,689	1,719	1,739
Less: O&M	(831)	(836)	(838)	(841)	(851)	(856)	(861)	(867)	(872)	(877)
Net cash flow from operations	619	680	706	731	749	773	797	822	847	862
Capital replacement	(63)	(38)	(1)	(1)	(35)	(52)	(51)	(36)	(55)	(130)
Net operating cash flow after capital replacement	557	642	705	730	714	722	746	786	792	732
Capital cost	-	-	-	-	-	-	-	-	-	-
Net project cash flow	557	642	705	730	714	722	746	786	792	732
Cumulative net project cash flow	(51,572)	(50,930)	(50,225)	(49,494)	(48,780)	(48,059)	(47,312)	(46,526)	(45,734)	(45,002)

Note: Net Operating Cash Flow available after Capital Replacement is the free cash flow available for capital financing purposes or for servicing financing for capital construction (excluding consideration of inflation).



Exhibit 1. Net Project Cash Flow Through Phase 1 Blended (2013 dollars in millions) MEDIUM Case (continued)

2013\$ MM	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
Revenue	1,759	1,779	1,800	1,821	1,842	1,864	1,885	1,908	1,931	1,954
Less: O&M	(879)	(883)	(885)	(894)	(899)	(901)	(906)	(911)	(912)	(919)
Net cash flow from operations	880	896	915	926	943	962	980	996	1,019	1,035
Capital replacement	(142)	(114)	(76)	(65)	(136)	(163)	(159)	(145)	(389)	(433)
Net operating cash flow after capital replacement	738	782	839	861	807	800	820	852	630	602
Capital cost	-	-	-	-	-	-	-	-	-	-
Net project cash flow	738	782	839	861	807	800	820	852	630	602
Cumulative net project cash flow	(44,264)	(43,481)	(42,643)	(41,782)	(40,974)	(40,175)	(39,354)	(38,503)	(37,873)	(37,271)

Note: Net Operating Cash Flow available after Capital Replacement is the free cash flow available for capital financing purposes or for servicing financing for capital construction (excluding consideration of inflation).



Exhibit 1. Net Project Cash Flow Through Phase 1 Blended (2013 dollars in millions) MEDIUM Case (continued)

2013\$ MM	2052	2053	2054	2055	2056	2057	2058	2059	2060
Revenue	1,978	2,001	2,026	2,051	2,076	2,101	2,128	2,155	2,182
Less: O&M	(919)	(925)	(927)	(932)	(934)	(941)	(941)	(944)	(947)
Net cash flow from operations	1,059	1,076	1,099	1,119	1,142	1,160	1,187	1,211	1,235
Less: capital replacement	(532)	(576)	(649)	(510)	(483)	(534)	(474)	(492)	(436)
Net operating cash flow after capital replacement	527	500	450	609	659	627	713	720	800
Less: capital cost	-	-	-	-	-	-	-	-	-
Net project cash flow	527	500	450	609	659	627	713	720	800
Cumulative net project cash flow	(36,744)	(36,244)	(35,794)	(35,185)	(34,526)	(33,900)	(33,187)	(32,467)	(31,668)

Note: Net Operating Cash Flow available after Capital Replacement is the free cash flow available for capital financing purposes or for servicing financing for capital construction (excluding consideration of inflation).



Exhibit 1. Net Project Cash Flow Through Phase 1 Blended (2013 dollars in millions) LOW Case

2013\$ MM	Total Cash Flow through 2060	2013	2014	2015	2016	2017	2018	2019	2020	2021
Revenue	45,800	-	-	-	-	-	-	-	-	-
Less: O&M	(27,892)	-	-	-	-	-	-	-	-	-
Net cash flow from operations	17,908	-	-	-	-	-	-	-	-	-
Capital replacement	(6,376)	-	-	-	-	-	-	-	-	-
Net operating cash flow after capital replacement	11,532	-	-	-	-	-	-	-	-	-
Capital cost	(55,016)	(212)	(897)	(4,026)	(3,956)	(4,048)	(5,047)	(4,533)	(4,141)	(4,304)
Net project cash flow	(43,484)	(212)	(897)	(4,026)	(3,956)	(4,048)	(5,047)	(4,533)	(4,141)	(4,304)
Cumulative net project cash flow		(212)	(1,109)	(5,135)	(9,091)	(13,139)	(18,186)	(22,720)	(26,861)	(31,165)

Note: Net Operating Cash Flow available after Capital Replacement is the free cash flow available for capital financing purposes or for servicing financing for capital construction (excluding consideration of inflation).



Exhibit 1. Net Project Cash Flow Through Phase 1 Blended (2013 dollars in millions) LOW Case (continued)

2013\$ MM	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Revenue	185	260	340	425	516	643	701	846	943	1,033
Less: O&M	(224)	(239)	(280)	(317)	(332)	(500)	(510)	(720)	(730)	(737)
Net cash flow from operations	(39)	21	60	109	184	144	191	127	213	296
Capital replacement	-	-	-	-	-	-	-	-	-	(57)
Net operating cash flow after capital replacement	(39)	21	60	109	184	144	191	127	213	239
Capital cost	(3,729)	(4,758)	(4,758)	(4,758)	(2,541)	(1,654)	(1,654)	-	-	-
Net project cash flow	(3,767)	(4,737)	(4,698)	(4,649)	(2,357)	(1,510)	(1,463)	127	213	239
Cumulative net project cash flow	(34,932)	(39,669)	(44,367)	(49,016)	(51,373)	(52,883)	(54,347)	(54,220)	(54,007)	(53,768)

Note: Net Operating Cash Flow available after Capital Replacement is the free cash flow available for capital financing purposes or for servicing financing for capital construction (excluding consideration of inflation).



Exhibit 1. Net Project Cash Flow Through Phase 1 Blended (2013 dollars in millions) LOW Case (continued)

2013\$ MM	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Revenue	1,084	1,137	1,158	1,179	1,200	1,221	1,243	1,266	1,288	1,302
Less: O&M	(742)	(747)	(750)	(752)	(761)	(765)	(770)	(775)	(788)	(792)
Net cash flow from operations	342	390	408	427	439	456	473	490	500	510
Capital replacement	(57)	(35)	(1)	(1)	(32)	(47)	(46)	(32)	(50)	(118)
Net operating cash flow after capital replacement	285	356	408	426	407	410	427	458	450	392
Capital cost	-	-	-	-	-	-	-	-	-	-
Net project cash flow	285	356	408	426	407	410	427	458	450	392
Cumulative net project cash flow	(53,483)	(53,128)	(52,720)	(52,294)	(51,887)	(51,477)	(51,050)	(50,592)	(50,141)	(49,749)

Note: Net Operating Cash Flow available after Capital Replacement is the free cash flow available for capital financing purposes or for servicing financing for capital construction (excluding consideration of inflation).



Exhibit 1. Net Project Cash Flow Through Phase 1 Blended (2013 dollars in millions) LOW Case (continued)

2013\$ MM	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
Revenue	1,317	1,332	1,347	1,362	1,378	1,394	1,410	1,426	1,443	1,460
Less: O&M	(794)	(798)	(800)	(807)	(809)	(811)	(815)	(820)	(821)	(826)
Net cash flow from operations	523	534	548	556	569	583	595	607	623	634
Capital replacement	(129)	(104)	(69)	(59)	(123)	(148)	(145)	(131)	(353)	(393)
Net operating cash flow after capital replacement	394	431	479	497	445	435	451	475	270	241
Capital cost	-	-	-	-	-	-	-	-	-	-
Net project cash flow	394	431	479	497	445	435	451	475	270	241
Cumulative net project cash flow	(49,355)	(48,924)	(48,446)	(47,949)	(47,503)	(47,068)	(46,618)	(46,143)	(45,872)	(45,631)

Note: Net Operating Cash Flow available after Capital Replacement is the free cash flow available for capital financing purposes or for servicing financing for capital construction (excluding consideration of inflation).



Exhibit 1. Net Project Cash Flow Through Phase 1 Blended (2013 dollars in millions) LOW Case (continued)

2013\$ MM	2052	2053	2054	2055	2056	2057	2058	2059	2060
Revenue	1,478	1,495	1,513	1,531	1,550	1,568	1,588	1,608	1,628
Less: O&M	(827)	(833)	(834)	(838)	(840)	(845)	(845)	(848)	(850)
Net cash flow from operations	650	662	679	693	710	723	743	760	777
Less: capital replacement	(483)	(522)	(588)	(463)	(438)	(484)	(430)	(446)	(395)
Net operating cash flow after capital replacement	168	140	90	230	272	239	312	314	382
Less: capital cost	-	-	-	-	-	-	-	-	-
Net project cash flow	168	140	90	230	272	239	312	314	382
Cumulative net project cash flow	(45,464)	(45,323)	(45,233)	(45,003)	(44,731)	(44,492)	(44,180)	(43,866)	(43,484)

Note: Net Operating Cash Flow available after Capital Replacement is the free cash flow available for capital financing purposes or for servicing financing for capital construction (excluding consideration of inflation).

